

AMENDMENTS TO THE CLAIMS

Please replace the claims, including all prior versions, with the listing of claims below.

Listing of Claims:

Claim 1. (Currently amended) A Method~~method~~ for producing an integrated circuit (23) with a rewiring device (18, 19), having the following steps~~comprising~~:

~~provision of providing~~ a carrier device (10) with predefined or subsequently patterned cutouts (11);

~~application of applying~~ at least one integrated circuit (14) upside down to the carrier device (10) in such a way that the ~~defined~~ cutouts (11) of the carrier device (10) are located above at least one connection device (15) of the integrated circuit (14);

~~application of applying~~ an insulation device (17) to ~~that~~a side of the carrier device (10) which is not covered by the integrated circuit (14), omitting the at least one connection device (15) in the cutout (11);

~~application of applying~~ the patterned rewiring device (18, 19) to the insulation device (17);

~~application of applying~~ a patterned solder resist device (20) to the patterned rewiring device (18, 19); and

~~patterned application of applying, in a patterned manner~~, solder balls (22) on sections (21) of the rewiring device (18) which are not covered by the patterned solder resist device (20).

Claim 2. (Currently amended) The Method~~method~~ according to Claim~~claim~~ 1, characterized wherein

~~in that~~ the carrier device (10) is a film in which ~~the~~ at least one of the cutouts (11) is present in the form of a stamped-out hole.

Claim 3. (Currently amended) The Method method according to Claim 1 or 2, characterized

~~in that~~claim 1, wherein, before the application of the integrated circuit (14), an adhesive (12) is applied to the carrier device (10).

Claim 4. (Currently amended) The Method method according to ~~one of the preceding claims~~, characterized

~~in that~~claim 1, wherein the carrier device (10) is clamped in a clamping-in device (13) such as e.g. a frame.

Claim 5. (Currently amended) The Method method according to ~~one of the preceding claims~~, characterized

~~in that~~claim 1, wherein a multiplicity of integrated circuits (14) are applied to the carrier device (10) by means of a placement device, such as e.g. a pick-and-place tool.

Claim 6. (Currently amended) The Method method according to ~~one of the preceding claims~~, characterized

~~in that~~claim 1, wherein a protection device (16) is applied above the carrier device (10) and the at least one integrated circuit (14) applied.

Claim 7. (Currently amended) The Method method according to Claim 6, characterized

~~in that~~claim 6, wherein the protection device (16) is applied in an injection-molding or another potting or printing process and/or is subsequently partly or completely cured.

Claim 8. (Currently amended) The Method method according to ~~one of the preceding claims~~,

characterized

~~in that~~claim 8, wherein a polymer is applied as the insulation device (17).

Claim 9. (Currently amended) The Method~~method~~ according to ~~one of the preceding claims~~,
characterized

~~in that~~claim 8, wherein the insulation device (17) is printed on or produced in a photolithographic process.

Claim 10. (Currently amended) The Method~~method~~ according to ~~one of the preceding claims~~,
characterized

~~in that~~claim 8, wherein the patterned rewiring device (18, 19) is applied to the insulation device (17) by ~~means of the following steps~~:

~~application of applying~~ a carrier metallization to the insulation device (17);

~~application applying~~ and patterning of a mask on the carrier metallization;

~~application of applying~~ a conductor track metallization in regions of the carrier metallization which are not covered by the patterned mask;

~~removal of removing~~ the mask; and

patterning of the carrier metallization in accordance with the conductor track metallization structure.

Claim 11. (Currently amended) The Method~~method~~ according to ~~Claim 10~~,
characterized

~~in that~~claim 10, wherein the carrier metallization is sputtered on and/or the mask is patterned photolithographically and/or the conductor track metallization (18) is electrochemically plated and/or the carrier metallization is patterned ~~in an~~by etching step.

Claim 12. (Currently amended) The Method according to one of the preceding claims, characterized
in that claim 1, wherein the solder resist device (20) has a polymer.

Claim 13. (Currently amended) The Method according to one of the preceding claims, characterized
in that claim 1, wherein the solder resist device (20) is printed on.

Claim 14. (Currently amended) The Method according to one of the preceding claims, characterized
in that claim 1, wherein the solder balls (22) are applied in patterned fashion in a printing process and are subsequently reflowed, preferably in a reflow furnace.

Claim 15. (Currently amended) The Method according to one of the preceding claims, characterized
in that claim 1, wherein a multiplicity of integrated circuits (14) on a carrier device (10), after the application of the solder balls (22), are separated into individual integrated circuits (23) or groups of integrated circuits (23).

Claim 16. (Currently amended) The Method according to Claim 15, characterized
in that wherein a multiplicity of integrated circuits (14, 23) with rewiring devices (18, 19) on the carrier device (10) undergo a functional test prior to the separation.

Claim 17. (Currently amended) The Method according to one of the preceding claims, characterized
in that claim 1, wherein the patterned rewiring device (18, 19) is patterned in such a way that it extends laterally beyond the integrated circuit (14).

Claim 18. (Currently amended) The Method~~method~~ according to one of the preceding claims, characterized

~~in that~~claim 1, wherein multichip modules are formed, which ~~preferably~~ have different individual ICs.

Claim 19. (Currently amended) An Integrated~~integrated~~ circuit (23) with a rewiring device (18, 19), having comprising:

a carrier device (10) with predefined or subsequently patterned ~~cutouts~~(11)cutouts;

at least one integrated circuit (14) upside down on the carrier device (10) ~~in such a way that the~~ defined ~~cutouts~~(11)cutouts of the carrier device (10) are located above at least one connection device (15) of the integrated circuit (14);

an insulation device (17) on ~~that~~a side of the carrier device (10) which is not covered by the integrated circuit (14), omitting the at least one connection device (15) in the cutout (11);

the patterned rewiring device (18, 19) on the insulation device (17);

a patterned solder resist device (20) on the patterned rewiring device (18, 19); and

solder balls (22) on sections (21) on the rewiring device (18) which are not covered by the patterned solder resist device (20).